



**DESIGNATION  
OF  
CORRECTIVE ACTION MANAGEMENT UNIT  
AND  
RESPONSE TO COMMENTS**

**U.S.S. Lead Refinery, Inc.  
EPA I.D. # IND 047 030 226**

**DESIGNATION**  
**OF A**  
**CORRECTIVE ACTION MANAGEMENT UNIT**  
**AND**  
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This Designation of a Corrective Action Management Unit (CAMU) and Response to Comments (RTC) is issued for U.S.S. Lead Refinery, Inc. (USS Lead) pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. Section 6928(h), and in accordance with Title 40 Code of Federal Regulations (40 CFR) Section 264.552(a). The USS Lead facility is located in East Chicago, Indiana.

The purpose of this Designation of a CAMU and RTC is to document the U.S. EPA's rationale for designating a CAMU at the USS Lead facility and present U.S. EPA's response to comments received during the public comment period. All comments received by U.S. EPA were reviewed. Comments have been summarized and the U.S. EPA's responses have been provided below. The transcript of the public hearing and all comments received are contained in the Administrative Record.

**Introduction And Background**

On November 18, 1993, U.S. EPA and USS Lead entered into an Administrative Order on Consent (AOC) pursuant to Section 3008(h) of RCRA (U.S. EPA Docket No. V-W-001-94). The AOC requires the implementation of interim measures (ISMs) to mitigate potential threats to human health and the environment, and submittal of a CAMU proposal. Also, the AOC requires the implementation of a modified RCRA Facility Investigation (MRFI) upon completion of the ISMs, in order to determine the nature and extent of any release of hazardous waste and hazardous constituents from the facility.

**Rationale For Designating A CAMU**

The Regional Administrator (RA) may designate an area at a facility as a CAMU in accordance with the requirements of 40 CFR Section 264.552(c). Section 264.552(c) specifies decision criteria which apply to CAMUs and which serves as the basis for the RA to make CAMU determinations. These decision criteria are



addressed below, and serve as the basis for designating the CAMU at USS Lead:

- (1) The CAMU shall facilitate the implementation of reliable, effective, and cost effective remedies [40 CFR 264.552(c)(1)];

The CAMU will facilitate the removal, consolidation, and containment of remediation wastes from the facility. These remediation wastes will include slag material, residual lead-battery case chips, and contaminated soils and sediments containing the worst releases of hazardous waste constituents at the facility. The releases at the facility are predominantly of lead and other metals from emission control dust from secondary lead smelting (K061 hazardous waste). Any potential releases from the remediation wastes in the CAMU will be contained by installing a perimeter low-permeability slurry wall, a system of ground-water wells on the inside and outside of the slurry wall to maintain an inward hydraulic gradient, and a final cover. The reliability and effectiveness of the containment system for the CAMU is enhanced by providing thirty (30) year post-closure care. This post-closure care includes ground-water monitoring to ensure that the integrity of the slurry wall is maintained and the containment system is functioning effectively. This post-closure care also includes maintenance of the final cover to preserve its integrity.

- (2) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents [40 CFR 264.552(c)(2)];

Waste management activities associated with implementation of the CAMU would be performed in accordance with a Health and Safety Plan, as contained in the requirements from the AOC, and would pose no unacceptable risk to humans or would result in little negative effect to the environment.

- (3) The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility [40 CFR 264.552(c)(3)];



The CAMU will not include uncontaminated areas of the facility.

- (4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable [40 CFR 264.552(c)(4)];

Future releases will be minimized by requiring maintenance and monitoring for the CAMU under a thirty (30) year post-closure care period to ensure that the containment system is functioning effectively. The post-closure care period will include maintenance of the CAMU's final cover and ground-water monitoring.

- (5) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable [40 CFR 264.552(c)(5)];

The CAMU will expedite the control of releases of hazardous waste constituents into wetland areas and other areas at and outside the facility. Along with the expediting of this remediation, the CAMU will facilitate the closure in place of three hazardous waste piles.

- (6) The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that would remain in place after closure of the CAMU [40 CFR 264.552(c)(6)]; and

Containment technologies would be used to provide containment of the wastes and enhance the protectiveness of the CAMU. In addition, maintenance and groundwater monitoring will be conducted under post-closure care for a period of thirty (30) years.

- (7) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes would remain in place after closure of the CAMU [40 CFR 264.552(c)(7)].

The CAMU would be constructed using a phased expansion to allow additional capacity for remediation wastes as needed. The CAMU would have a minimum area of seven (7) acres, and a maximum of fourteen (14) acres. Slag

material will be removed and placed in the CAMU. The area where the slag material is being removed from [approximately three (3) acres] is not included in the area designated as a CAMU. This represents a reduction of about eighteen (18) percent in land area upon which wastes would remain in place after closure of the CAMU.

### **Public Participation Activities**

U.S. EPA held a public comment period from March 26 to April 24, and May 20 to June 25, 1996. During the public comment period, U.S. EPA received five (5) written submittals of comments. On June 20, 1996, a public hearing was held at Riley Park Community Center, a location proposed by the local community. Fourteen (14) people participated in the public hearing. Five (5) of the participants provided oral comments to U.S. EPA.

### **Comments Raised And U.S. EPA's Responses**

The following summarizes specific comments received during the public comment period, and provides the U.S. EPA's responses. Commenters include:

- U.S.S. Lead Refinery, Inc.
- United States Department of the Army (U.S. Department of the Army).
- Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.
- Community residents and groups.

### **Comments From U.S.S. Lead Refinery, Inc.**

Comment #1:

U.S.S. LEAD REFINERY, INC. SUPPORTS THE STATEMENT OF BASIS ISSUED BY U.S. EPA, AND LOOKS FORWARD TO RECEIVING THE U.S. EPA'S APPROVAL OF THE ISM WORKPLAN. UPON RECEIVING FINAL U.S. EPA'S APPROVAL, U.S.S. LEAD REFINERY, INC. WILL INITIATE A REMOVAL ACTION AT THE SITE IN ACCORDANCE WITH THE ISM WORKPLAN.

Response:

The U.S. EPA is issuing a Designation of a CAMU and Response to Comments for the USS Lead facility. U.S. EPA will notify USS Lead of the designated CAMU at its facility. Upon U.S. EPA's



notification, USS Lead will implement the CAMU in accordance with the AOC.

**Comments From Indiana Department of Natural Resources, Division Of Historic Preservation And Archaeology**

Comment #2:

NO KNOWN HISTORICAL, ARCHITECTURAL, OR ARCHAEOLOGICAL SITES LISTED IN OR ELIGIBLE FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES WILL BE AFFECTED BY THIS PROJECT. IF ANY ARCHAEOLOGICAL ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION, FEDERAL LAW AND REGULATIONS (16 USC 470, ET SEQ.; 36CFR 800.11, ET. AL.) AND, ADDITIONALLY, STATE LAW (INDIANA CODE 14-21-1), REQUIRE THAT WORK MUST STOP AND THAT THE DISCOVERY MUST BE REPORTED TO THE DEPARTMENT OF NATURAL RESOURCES, DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY, WITHIN TWO (2) BUSINESS DAYS.

Response:

If any archaeological artifacts or human remains are uncovered during implementation of the CAMU and ISMs, compliance with Federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et. Al.) and, additionally, State law (Indiana Code 14-21-1) shall be required and maintained.

**Comments From The U.S. Department Of The Army**

Comment #3:

THE PROPOSED REMEDY DOES NOT INCORPORATE ALL THE CONDITIONS STATED IN DEPARTMENT OF THE ARMY PERMIT NO. 94-073-003-0 WHICH WAS ISSUED ON MARCH 27, 1995. IN ADDITION, THE CONDITIONS OF THE PERMIT WILL BE REQUIRED REGARDLESS OF WHICH ALTERNATIVE IS SELECTED.

Response:

The CAMU and ISMs incorporates the plans and specifications from the Army Permit No. 94-073-003-0. Specifically, prior to any excavation activities, a segregation berm is constructed to prevent potentially contaminated runoff from entering the wetlands. The berm consists of clean fill material and is approximately 1,800 feet long and 2 feet high. Also, the CAMU includes the implementation of the Revegetation Plan and Specifications as required by the permit.



Comment #4:

THE MAIN CONCERN WITH THIS ALTERNATIVE IS THE ON-SITE STORAGE OF HAZARDOUS MATERIALS IN A CORRECTIVE ACTION MANAGEMENT UNIT. ANY INCIDENTAL LEACHING OF THE PROPOSED CAMU INTO THE AQUATIC AREAS MAKES THIS AN UNDESIRABLE ALTERNATIVE.

Response:

The CAMU includes the construction of a low-permeability subsurface slurry wall, the implementation of hydraulic gradient controls, and a final cover to prevent migration of releases from the CAMU. Low permeability subsurface slurry walls are commonly used to prevent migration of contaminants in the ground water from contaminated sites. In addition, their effectiveness is increased when combined with implementation of hydraulic gradient controls, a final cover, and a ground-water monitoring system. A hydraulic gradient control maintains an inward hydraulic gradient, a final cover reduces the infiltration of precipitation and snow melt into the subsurface, and a ground-water monitoring system allows monitoring of the integrity of the system and its effectiveness for containing releases.

Additionally, the review process for the ISM Workplan, Final Design Documents, and ISM Report will further address the commenter's concerns regarding adequate protection of human health and the environment. The ISM Workplan, Final Design Documents, and ISM Report are documents that USS Lead is required to submit for U.S. EPA's review and approval under the requirements of the AOC.

Comment #5:

CONTAMINATED MATERIAL OF CONCERN WAS REMOVED FROM THE SITE, TREATED, AND STORED IN AN OFF-SITE HAZARDOUS WASTE LANDFILL UNDER TWO PARTIAL INTERIM AGREED ORDERS BETWEEN USS LEAD AND THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. IT IS UNCLEAR WHY U.S. EPA IS PROPOSING TO STORE THE MATERIALS ON SITE. IT APPEARS THAT COST IS A FACTOR FOR RECOMMENDING ALTERNATIVE 1, BUT HEALTH CONCERNS MAY BE BETTER SERVED IF ALTERNATIVE 2 (REMOVAL, ON-SITE TREATMENT, AND OFF-SITE DISPOSAL) OR ALTERNATIVE 3 (REMOVAL, OFF-SITE TREATMENT, AND OFF-SITE DISPOSAL) WERE CHOSEN.

Response:

The CAMU is an area of the USS Lead facility that is used for the management of remediation wastes under RCRA corrective action. The CAMU meets the seven (7) criteria specified under 40 CFR



264.552(c) that are the basis for designating a CAMU. These criteria include the facilitation of reliable, effective, protective, and cost-effective remedies; minimization of risks during remediation; preference for exclusion of uncontaminated areas; minimization of future releases; expeditious timing for remediation; enhanced long-term effectiveness; and minimization of land areas where wastes will remain in place to the extent practicable.

Comment #6:

INCLUDE TIME FRAME IN WHICH TO MONITOR RESTORATION OF THE SITE.

Response:

The requested time frame as contained in the AOC is as follows:

- Submittal of Draft ISM Report upon completion of the CAMU and ISMs.
- Submittal of Final ISM Report within fifteen (15) days after receipt of U.S. EPA's comments on Draft ISM Report.
- Submittal of a MRFI Workplan within sixty (60) days of the approval of the final ISM Report and completion of the ISMs.
- Initiate implementation of the MRFI within thirty (30) days of U.S. EPA's approval of the MRFI Workplan.

Comment #7:

HEALTH AND ENVIRONMENTAL CONCERNS WARRANT A THIRTY (30) YEAR - MONITORING PERIOD REGARDLESS OF THE CORRECTIVE MEASURE CHOSEN. IT IS THEREFORE RECOMMENDED THAT THE UPLANDS, WETLANDS, AND GRAND CALUMET RIVER BE SAMPLED FOR A MINIMUM OF THIRTY (30) YEARS TO ADEQUATELY MONITOR THE EFFECTIVENESS OF THE CLEANUP AND DETERMINE IF ANY RESIDUAL TOXINS ARE LEACHING INTO THE WATER COLUMN.

Response:

Normally, the adequacy of additional or expanded monitoring programs relies, in large part, on the quality and quantity of the site characterization information used in designing the program. Given the lack of information on the site at this time, the implementation of an expanded monitoring program is deferred until selection of a final remedy for the USS Lead facility.



**Comments From Community Groups And Residents**

Comment #8:

DESCRIBE ACTIVITIES FOR OFF-SITE REMEDIATION.

Response:

Within sixty (60) days of the approval of the final ISM Report and completion of the ISMs, Respondent shall submit for U.S. EPA's review and approval a MRFI Workplan for the MRFI. The MRFI Workplan shall be designed to define the presence, magnitude, and extent of any hazardous wastes or hazardous constituents that may have migrated beyond the facility boundary as a result of operations at the U.S.S. Lead facility. The MRFI Workplan shall document the procedures that USS Lead will use to conduct those investigations necessary to define the degree and extent of any contamination released from the facility. A specific schedule for implementation of all activities shall be included in the MRFI Workplan.

Within thirty (30) days of U.S. EPA approval of the MRFI Workplan, Respondent shall commence work, and shall implement the tasks required by the MRFI Workplan in accordance with the standards, specifications, and schedule stated in the MRFI as approved or modified by U.S. EPA.

Comment #9:

SINCE THE CAMU IS NOT SUBJECT TO THE LAND DISPOSAL RESTRICTION REQUIREMENTS, IT REPRESENTS THE LEAST EXPENSIVE OPTION. THEREFORE, COST WAS THE ONLY PARAMETER OF CONCERN FOR SELECTING CAMU.

Response:

The CAMU facilitates reliable, effective, and cost effective remedies as specified in 40 CFR Section 264.552(c)(1). The CAMU consists of a perimeter low-permeability slurry wall, a system of ground-water wells to maintain an inward hydraulic gradient and monitor for releases, and a final cover. In addition, the CAMU is subject to maintenance and monitoring requirements under a thirty (30) year post-closure care period to ensure that the system's reliability, effectiveness, and cost-effectiveness is maintained.



Comment #10:

ON-SITE DISPOSAL PRESENTS POTENTIAL HARM TO HUMAN HEALTH AND THE ENVIRONMENT SINCE HAZARDOUS AND TOXIC MATERIALS WILL NOT BE REMOVED.

Response:

U.S. EPA responded to this comment in its response to Comment #5.

Comment #11:

THE CAMU IS ONLY A SUPERFICIAL AND PARTIAL REMEDY TO THIS PROBLEM.

Response:

The CAMU facilitates the implementation of interim measures at the USS Lead facility. Interim measures are a way of expediting the protection of human health and the environment, but they do not represent final remedies for remediation of contamination at facilities.

Comment #12:

ALTERNATIVE 3 IS BEST FOR SOLVING THE PROBLEM.

Response:

Alternative 3 involves the removal, off-site treatment, and off-site disposal of the contaminated material. While this approach may appear to solve the problem "once and for all," in reality, it does not.

The excavation and transport of such large quantities of material pose significant threats to human health and the environment. This is due to the possibility of exposure from airborne dust from removal or transportation accidents resulting from the many truckloads of material that must be removed.

Alternative 1 (Removal, Consolidation, and On-Site Disposal), is a well tested remedy.



Comment #13:

ALTERNATIVE 1 WAS PRE-SELECTED.

Response:

Alternative 1 (Removal, Consolidation, and On-Site Disposal) has been evaluated to determine if the CAMU meets the seven (7) criteria set forth for the designation of a CAMU as specified under 40 CFR 264.552(c). As indicated in U.S. EPA's response to Comment #5, the CAMU facilitates a reliable, effective, protective, and cost-effective remedy, and minimizes future releases. Also, the CAMU expedites the timing for remediation, enhances long-term effectiveness, and minimizes risks during remediation. In addition, the CAMU would cover a maximum of fourteen (14) acres and would not include any uncontaminated areas from the facility.

Comment #14:

WHAT ARE THE DISTINCTIONS BETWEEN OFF-SITE AND ON-SITE TREATMENT FROM ALTERNATIVES 2 (REMOVAL, ON-SITE TREATMENT, AND OFF-SITE DISPOSAL) AND ALTERNATIVE 3 (REMOVAL, OFF-SITE TREATMENT, AND OFF-SITE DISPOSAL). PREFERENCE FOR SHIPPING WASTES OFF-SITE FOR TREATMENT.

Response:

The considerations regarding on-site treatment versus off-site treatment are cost and safety. Off-site treatment would be costlier. Also, off-site treatment raises safety concerns regarding the transportation of remediation wastes to the off-site treatment facility.

Comment #15:

THE CAMU DOES NOT EXTEND TO THE ENTIRE CONTAMINATED AREA AND EVEN IF STAGE TWO WERE IMPLEMENTED AND CLAY WALLS EXTENDED TO THE TILL LAYER IN THE AREA, WE WOULD STILL HAVE CONTAMINATED GROUND WATER AND SOILS THAT CONTINUE TO CONTAMINATE THE SURROUNDING ECOSYSTEM. A MORE PROTECTIVE REMEDIAL ACTION THAN THE INTERIM MEASURE AND CAMU IMPLEMENTATION IS NECESSARY TO AVOID CONTINUED OFF-SITE MIGRATION AND FOR PROVIDING PROTECTION TO THE SURROUNDING COMMUNITY, THE GRAND CALUMET RIVER/LAKE MICHIGAN, AND THE WILDLIFE AND ECOSYSTEM RESOURCES IN THIS AREA.



## Response:

As indicated in U.S. EPA's response to Comment #11, the CAMU allows the implementation of interim measures at the USS Lead facility. As also indicated, interim measures are a way of expediting the protection of human health and the environment and they do not represent final remedies for remediation of contamination at facilities. Additional remediation efforts, including selection of a final remedy, would be implemented at a later time in the corrective action program at the USS Lead facility.

## Comment #16:

CONCERN IS EXPRESSED ABOUT THE LEVEL OF LEAD THAT WAS DETERMINED TO BE IN SOIL NEAR THE FACILITY ACCORDING TO A U.S. EPA INSPECTION REPORT DATE OCTOBER 15, 1985. IT IS REQUESTED THAT MORE RESIDENTIAL NEIGHBORHOOD SOIL SAMPLES BE TAKEN, WITH A FOCUS ON AREAS WHERE CHILDREN LIVE, PLAY, AND GO TO SCHOOL. IF HAZARDOUS LEVELS ARE DOCUMENTED AND THE CONTAMINATED SOILS COULD BE INGESTED OR INHALED, THEN BLOOD LEAD TESTS OF CHILDREN AND OTHER INDIVIDUALS AT RISK SHOULD BE CONDUCTED. WE REQUEST THAT THIS TESTING PROCESS BEGIN IMMEDIATELY. IF U.S. EPA IS NOT THE APPROPRIATE AGENCY TO REQUIRE OR IMPLEMENT TESTING, SUGGESTIONS FOR A PUBLIC HEALTH PROTECTION PROGRAM SHOULD BE PROVIDED.

## Response:

U.S. EPA is aware of the potential presence of elevated levels of lead in areas in the vicinity of the USS Lead site, including nearby neighborhood community areas. U.S. EPA will be working with the community and USS Lead to address these concerns. These concerns will be dealt with separately in a different context since they are not directly related to the CAMU at the USS Lead site. U.S. EPA will inform the community of any activities that will be undertaken to address these concerns.

## Comment #17:

WHO OWNS THE LAND WHERE THIS PROJECT IS BEING PROPOSED? ALSO, INDICATE ZONING FOR THE AREA BASED UPON THE RESIDENTIAL ISSUE.

## Response:

The property is owned by U.S.S. Lead and is zoned industrial. Zoning decisions are under the jurisdiction of the local zoning



authority. Any additional requested information may be obtained from that source.

Comment #18:

NO SOILS SHOULD BE LEFT ON THE GROUND WITH CONCENTRATIONS ABOVE 400 PARTS PER MILLION (PPM) OF LEAD PRESENTLY DESIGNATED FOR RESIDENTIAL AND INDUSTRIAL SITES.

Response:

U.S. EPA has selected a removal level of 500 milligrams per kilogram (mg/kg) or ppm of lead for the ISMs at the USS Lead facility for the purpose of removing the worst contamination at the site on an expedited basis. Normally, cleanup levels are determined based on evaluation of health and ecological risk assessment information as part of the final remedy selection process. As U.S. EPA responded to Comment #11, the CAMU and ISMs do not represent a final remedy for the USS Lead site.

Comment #19:

SOILS HIGHLY CONTAMINATED WITH METALS SHOULD BE REMOVED FROM THE SITE AND SUBJECT TO A RECOVERY PROCESS BEFORE THEY ARE PLACED IN THE CAMU. THE RECOVERY PROCESS CAN BE CARRIED ON-SITE IF IT IS CONDUCTED IN A SAFE MANNER.

Response:

Soils are not treated as part of the implementation of the CAMU. Removed contaminated soils are placed in the CAMU for containment to prevent further releases of hazardous constituents. The CAMU provides reliable containment of remediation wastes as described in U.S. EPA's response to Comment #4.

Comment #20:

A MORE COMPLETE PUMP AND TREAT SYSTEM SHOULD BE INSTALLED AND TREATMENT SHOULD BE PROVIDED IN A WATER TREATMENT PLANT.

Response:

Ground water will be pumped from wells placed in the inside of the slurry wall from the CAMU as necessary to maintain an inward hydraulic gradient. Disposal of pumped water is performed in accordance with applicable Federal and State requirements. Decisions regarding ground water remediation cannot be proposed at the site at this time because of the lack of sufficient



information on the ground water beneath the facility. Decisions regarding ground water remediation are deferred until selection of a final remedy for the USS Lead facility.

Comment #21:

CONTROL AND TREATMENT OF RUNOFF SHOULD BE IMPLEMENTED.

Response:

An earthen berm is installed around the wetlands areas from the facility. This berm prevents runoff from entering those wetland areas. Also, USS Lead shall comply with applicable State storm water permit requirements.

Comment #22:

A DUST CONTROL PLAN SHOULD BE PUT INTO PRACTICE AT THE SITE.

Response:

Normally, formulation of a dust control plan is an integral part of a site remediation project, including identification of dust sources, controls, and development of inspection, record keeping, and monitoring programs. The CAMU and ISM implementation include a program for controlling cleanup and wind erosion emissions. As part of the plan, a lead action level of 1.0 microgram per cubic meter of air, and particulate matter of 100 micrograms per cubic meter of air is utilized at the USS Lead site. This plan meets the national primary and secondary ambient air quality standards for particulate matter and lead. The control measures consist of perimeter, area, and instantaneous field monitoring for total lead and particulate matter. Also; personnel monitoring for total lead, cadmium, arsenic, and particulate matter is implemented. In addition, continuous misting during excavation, loading, and handling of contaminated material is conducted.

Comment #23:

THE OLD UNDERGROUND SEWER SYSTEM SHOULD BE REMOVED AND DISPOSED OFF-SITE OR IN THE CAMU AS DEEMED APPROPRIATE. CAPPING AND WELDING OF OLD PIPES WILL NOT PREVENT SEEPING EFFECTIVELY.

Response:

Any portions of water and sewer lines that are encountered in the path of the slurry wall are removed, regardless of their size. By removing those portions of lines that would otherwise transect



the wall, any potential transport of fluids from the CAMU through conduits is eliminated. Also, the conduit at the canal inlet from the facility will be removed to eliminate any flow of contaminants into the wetlands and the Grand Calumet River. Another consideration is that lines which are six (6) inches or larger in diameter could potentially collapse inside the CAMU and cause subsidence. These lines with diameter equal or greater than six (6) inches are pressured grouted or removed. Lines which are less than six (6) inches in diameter are left in place inside the CAMU since their collapse is not likely to cause a large depression.

Comment #24:

THE WETLAND HAS BEEN FILLED WITH SLAG WHICH CONTAINS VARIOUS HAZARDOUS CONSTITUENTS. IN ADDITION, RUNOFF FROM USS LEAD HAS CONTAMINATED THE WETLANDS AND THE GRAND CALUMET RIVER.

Response:

This CAMU and ISMs is limited to remediation of the worst contaminated sediments from the Outfall Canal. The upper 1/8th of the length of the Outfall Canal is prioritized for remediation. Contaminated sediments with concentrations greater or equal to 5,000 ppm of lead are initially prioritized for removal and disposal in the CAMU. Subsequently, contaminated sediments with concentrations greater or equal to 500 ppm of lead are removed and disposed in the CAMU. This CAMU and ISM implementation does not include characterization of impacts on the wetlands at the site nor a proposal for wetland remediation. Those activities are deferred until selection of a final remedy for the USS Lead facility.

Comment #25:

A PLANT LIST FROM THE DUPONT DUNE AND SWALE HAS BEEN PROVIDED TO U.S. EPA. IN PLACES WHERE IT IS APPROPRIATE TO USE NATIVE VEGETATION IN THE STABILIZATION PROCESS THE PLANT LIST SHOULD BE DRAWN FROM THOSE SPECIES NATIVE TO THE DUNE AND SWALE SYSTEM WHICH CAN BE IDENTIFIED AT THE SITE.

Response:

U.S. EPA agrees that consideration of the ecological characteristics of this area should be an integral part of the remedy implementation process. U.S. EPA will consider this recommendation regarding long-term ecological restoration and plant list at the time additional remediation efforts, including



ground water flow will only need to be done on an intermittent basis.

Comment #31:

DESCRIBE ABILITY OF EPA PERMIT WRITERS TO CREATE MODIFICATIONS ON THE SPECIFICATIONS FOR THE CAMU DESIGN.

Response:

As indicated in U.S. EPA's response to Comment #4, the review process for the ISM Workplan, Final Design Documents, and ISM Report will incorporate into the CAMU any additional conditions that are necessary for adequate protection of human health and the environment.

Comment #32:

DESCRIBE ANY WATER DISCHARGE PERMITS ISSUED TO USS LEAD FOR DISCHARGES INTO THE GRAND CALUMET RIVER IN THE PERIMETERS OF THEIR FACILITY AND THE CONDITIONS OF SUCH PERMITS.

Response:

The expired National Pollutant Discharge Elimination System (NPDES) Permit and fact sheet can be found attached for reference. To the best of U.S. EPA's knowledge, no permit has been issued to cover or authorize any discharges from the site.

#### Administrative Record

The Administrative Record supporting the CAMU designation for the USS Lead facility is available for viewing and copying at the Robert A. Pastrick Branch of the East Chicago Public Library, 1008 West Chicago Avenue, East Chicago, Indiana. The Administrative Record is also available at the Waste, Pesticides, and Toxics Division Record Center, U.S. EPA, Region 5, 77 West Jackson Boulevard, 7th floor, Chicago, Illinois.

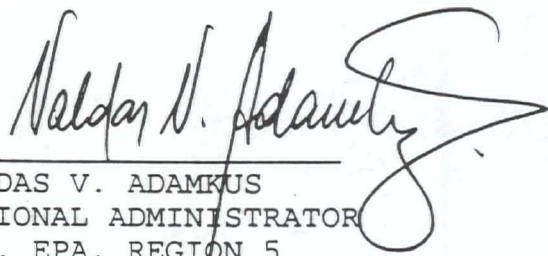
#### Future Actions

U.S. EPA will issue a notification to USS Lead of the CAMU designation. Upon U.S. EPA's notification, USS Lead will implement the CAMU in accordance with the AOC.



Declarations

U.S. EPA has documented the rationale for designating the CAMU at the USS Lead facility and has made such documentation available to the public.



VALDAS V. ADAMKUS  
REGIONAL ADMINISTRATOR  
U.S. EPA, REGION 5

11/08/96.

DATE

Attachment

IN THE MATTER OF:

U.S.S. Lead Refinery, Inc.  
East Chicago, Indiana  
EPA I.D. # IND 047 030 226